Material Safety Data Sheet

Ethyl cyanoacetate MSDS

Section 1: Chemical Product and Company Identification

Product Name: Ethyl cyanoacetate
Catalog Codes: 10691
CAS#: 105-56-6
RTECS: AG4110000
TSCA: Not available
Synonym: Cyanoacetic Acid Ethyl Ester
          Cyanoacetic Ester
          Ethyl Cyanoethanoate
          Malonic Acid Ethyl Ester Nitrile
Chemical Formula: C5H7NO2

Contact Information:
Finar Limited
184-186/P, Chacharwadi Vasna,
Sarkhej-Bavla Highway,
Ta.: Sanand, Dist.: Ahmedabad,
Email: info@finarchemicals.com
Web: www.finarchemicals.com

Section 2: Composition and Information on Ingredients

Composition:

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl cyanoacetate</td>
<td>105-56-6</td>
<td>99%</td>
</tr>
</tbody>
</table>

Section 3: Hazards Identification

EMERGENCY OVERVIEW
LACHRYMATOR
IRRITANT
Irritating to skin, eyes, and respiratory system.
May have harmful effects if inhaled or swallowed.
Avoid prolonged exposure.
Do not breathe vapor.

Potential Health Effects
Skin contact may cause skin irritation with discomfort or rash. Skin absorption may occur in amounts capable of producing toxic effects.
Eye contact may cause eye irritation with discomfort, tearing or blurring of vision.
Inhalation may cause irritation of the nose and throat with sneezing, sore throat, runny nose, or shortness of breath.
Other effects of exposure may include headache, nausea or vomiting.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes while keeping eyes open. COLD water may be used. Seek medical attention.

Skin Contact:
After contact with skin, wash with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. COLD water may be used. Cover the irritated skin with an emollient. Seek medical attention. Wash any contaminated clothing before reusing.
Inhalation:
Remove victim from source of exposure to fresh air. If breathing is difficult administer oxygen. Seek medical attention.

Ingestion:
Do not induce vomiting. Give water to victim to drink. Seek medical attention.

Section 5: Fire and Explosion Data

<table>
<thead>
<tr>
<th>Flammable Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point, °C: 110</td>
</tr>
<tr>
<td>Autoignition, °C: 460</td>
</tr>
<tr>
<td>Upper exp. limit, %: 10.6</td>
</tr>
<tr>
<td>Lower exp. limit, %: 1.7</td>
</tr>
<tr>
<td>NFPA Rating: 1 - health, 1 - flammability, 1 - instability</td>
</tr>
</tbody>
</table>

Hazardous gases/vapors produced in a fire: Carbon monoxide, carbon dioxide, nitrogen oxides and hydrogen cyanide.

Extinguishing Media
Water Spray, Foam, Dry Chemical, CO2.

Fire Fighting Instructions
Wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Substance may react with water, and may release corrosive and/or toxic gases. Extinguishing media: Use dry chemical or carbon dioxide. Contact with water or steam may produce toxic and flammable vapors.

Section 6: Accidental Release Measures

Safeguards (Personnel)
NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Initial Containment
Dike spill. Prevent material from entering sewers, waterways, or low areas.

Spill Clean Up
Soak up with sawdust, sand, oil dry or other absorbent material.
Dispose of in an approved container.

Accidental Release Measures
Wear self-contained breathing apparatus and full protective gear.
Ventilate area and wash spill site after material pickup is complete.

Section 7: Handling and Storage

Handling (Personnel)
Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling.

Storage
Keep container tightly closed. Store in a cool dry place.

Section 8: Exposure Controls/Personal Protection

Engineering Controls
Keep container tightly closed. Use only in a chemical fume hood. Store in a cool dry place.

Personal Protective Equipment
Eye/face protection: Wear coverall chemical splash goggles.
Respirators: Wear NIOSH approved respiratory protection, as appropriate.
Protective Clothing: Where there is potential for skin contact have available, and wear as appropriate, impervious gloves, apron, pants, and jacket.

Exposure Guidelines
Exposure limits
ETHYL CYANOACETATE
PEL (OSHA) : None Established
TLV (ACGIH) : None Established
Section 9: Physical and Chemical Properties

Physical State: Liquid
Appearance: Light yellow
Odor: Aromatic
pH: No information available.
Vapor Pressure: 1.3 hPa at 68 °C
Vapor Density: 3.9
Viscosity: 1.01 mPa.s at 20 °C
Boiling Point/Range: 208 - 210°C / 406.4 - 410°F @ 760 mmHg
Melting Point/Range: -22°C / -7.6°F
Flash Point: 110°C / 230°F
Autoignition Temperature: 478°C / 892.4°F
Water Solubility: 20 g/L (20°C)
Specific Gravity: 1.060
Molecular Formula: C5 H7 N O2
Molecular Weight: 113.12

Section 10: Stability and Reactivity Data

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Heat, flames and sparks, Exposure to light, Incompatible products.
Incompatibilities with Other Materials: Strong oxidizing agents, Strong acids, Strong bases, Strong reducing agents.
Hazardous Polymerization: Has not been reported

Section 11: Toxicological Information

ACUTE EFFECTS:
Irritant
May be harmful by ingestion and inhalation.
Material is irritating to mucous membranes and upper respiratory tract.
RTECS: AG4110000

ACUTE TOXICITY:
LD50 Subcutaneous - guinea pig - 1.115 mg/kg
Remarks: Behavioral: Tremor. Behavioral: Muscle contraction or spasticity. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
To the best of our knowledge, the toxicological properties of this product have not been fully determined.

Section 12: Ecological Information

No information available.

Section 13: Disposal Considerations

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Section 14: Transport Information

DOT/IMO/IATA
Proper Shipping Name: ETHYL CYANOACETATE
Hazard Class: 6.1
UN No.: 2666
Packing Group: III
Label(s): TOXIC
### Section 15: Other Regulatory Information

**U.S. Federal Regulations**
- TSCA Inventory Status: Reported/Included.

**TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312**
- Acute: Yes
- Chronic: No
- Fire: No
- Reactivity: No
- Pressure: No

### Section 16: Other Information

**References:** Not available.

**Other Special Considerations:** Not available.

**Created:** 10/06/2010

**Last Updated:** 24/11/2012

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Finar Limited be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Finar Limited has been advised of the possibility of such damages.